

**What is claimed is:**

1. A process of extracting small molecular ingredients from biological materials under super high pressure, characterized in that, it comprises the following steps:
  - ① The step of pretreatment, crashing and formulation: the raw material is pretreated, crashed, and then mixed with solvent by a proper ratio;
  - ② The step of closure: put the above mixture into the pressure container firstly and then close the container. Alternatively, close the container firstly and then charge the mixture into the container;
  - ③ The step of increasing pressure: increase the pressure of the pressure container from normal pressure to the predefined pressure of 100MPa-1000MPa;
  - ④ The step of holding pressure: hold the predefined pressure for 3-30 minutes;
  - ⑤ The step of releasing pressure: release the pressure of pressure container to the normal pressure, and remove the mixture from the container.
2. The process according to claim 1, characterized in that, the mixture of step ① is firstly poured into a packing container which is then airproofed, and subsequently the packing container is put into the pressure container which is then closed; after that, the medium for transferring pressure is charge into the pressure container, and then the pressure of the pressure container is increased via the medium, and finally it is released to the normal pressure, and the extract mixture is removed.
3. The process according to claim 1 or 2, characterized in that, the steps of increasing pressure, holding pressure and releasing pressure are finished by one step or several steps.
4. The process according to claim 3, characterized in that, the steps of increasing pressure, holding pressure and releasing pressure are finished by several steps in a ladder-type, which means that the pressure is increased to the first predefined pressure, and held for certain time, and then further increased to the second predefined higher pressure, and held for certain time, and increased again until

reaching the last predefined pressure, and finally the pressure is released.

5. The process according to claim 3, characterized in that, the steps of increasing pressure, holding pressure and releasing pressure are finished by several steps in a pulse-type, which means that the pressure is increased to the first predefined pressure, held for certain time and released; the pressure is then increased to the second predefined pressure, held for certain time and released, thus repeated for two or more times, each of the pressure may be the same or not.
6. The pressure according to claim 3, characterized in that, the steps of increasing pressure, holding pressure and releasing pressure are finished by several steps, which refers to extracting small molecular ingredients from biological materials under super high pressure for several times, i.e., the raw biomaterial extracted under super high pressure is mixed with solvent and extracted once more under high pressure, thus repeated for two or more times, the solvent of each extraction can be the same or not.
7. The process according to claim 1 or 2, characterized in that, the extraction under super high pressure can be combined with other processing technologies.
8. The process according to claim 7, characterized in that, the said combination is accomplished by placing or assembling devices in the pressure container, which can be used at any step, several steps or total steps of before increasing pressure, increasing pressure, holding pressure, releasing pressure or after releasing pressure.
9. The process according to claim 7, characterized in that, the combination is accomplished before extraction under super high pressure, wherein the processing technologies are called as prior treatment.
10. The process according to claim 1 or 2, characterized in that, said solvent includes water and/or organic solvent, or the mixture thereof.
11. The process according to claim 1 or 2, characterized in that, the medium for transferring pressure is liquid.
12. The process according to claim 1, characterized in that, step ① further comprises adding the chemicals and/or biological products as auxiliary additives

into the mixture of raw biomaterial and solvent.

13. The process according to claim 1 or 2, characterized in that, the extraction under super high pressure is combined with heating or cooling.
14. The process according to claim 13, characterized in that, the combination is accomplished in the pressure container with a heater.
15. The process according to claim 13, characterized in that, the combination is accomplished in the pressure container with a cooler
16. The process according to claim 13, characterized in that, the combination is accomplished by placing the pressure container into a cooler.